

# Area Air Defense Command System (AADCS) Capabilities Overview

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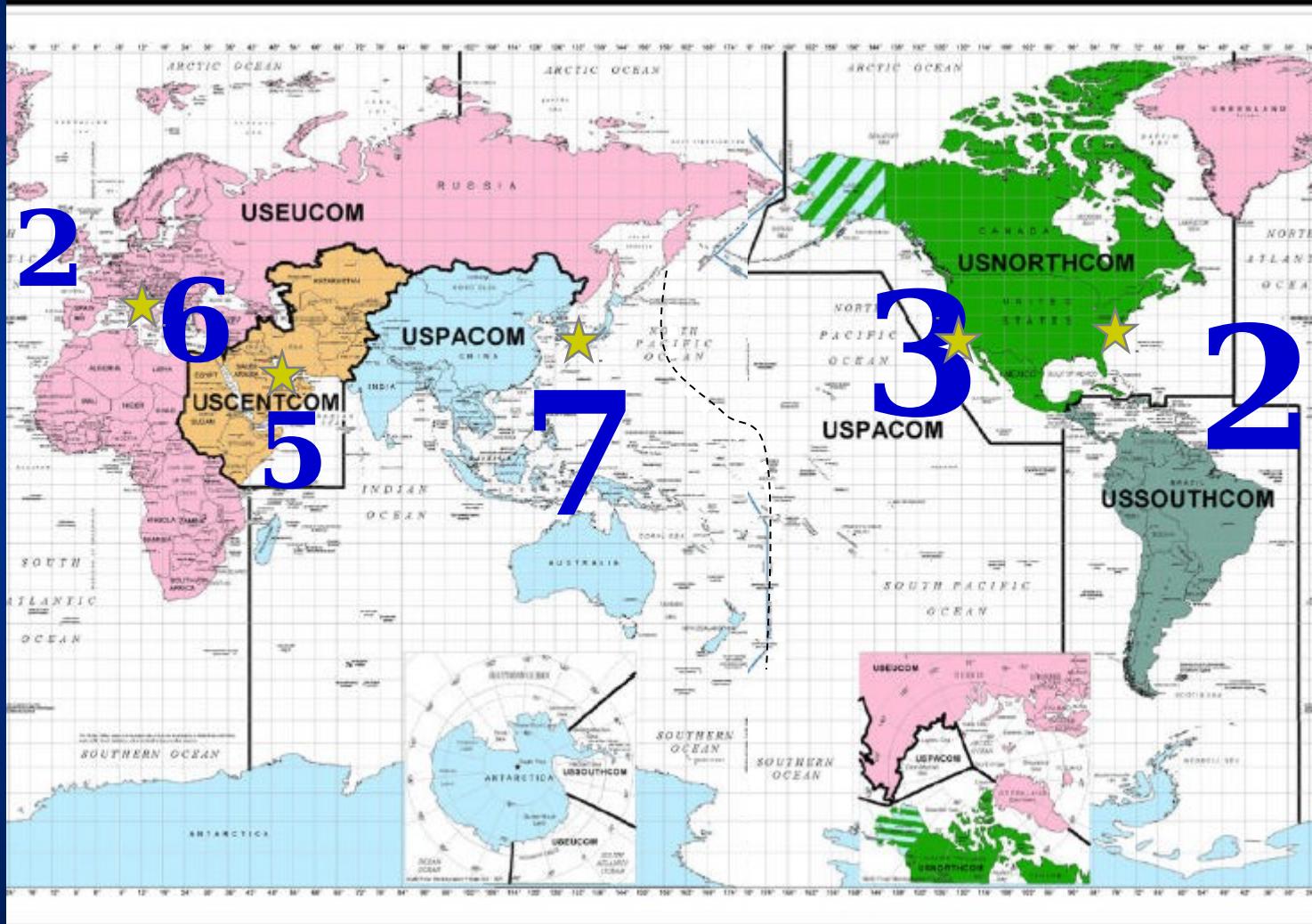
IMD 3-02 Experiment  
PLANEX  
23-27 June 2003

# AADCS Background

- **AADC Operational Requirements Document (ORD) Developed, Validated, and Implemented in 1998**
- **The AADC Capability (ops and plans) is currently deployed aboard**
  - ◆ Fleet flagships and one TBMD CG (initial prototype)
    - USS MOUNT WHITNEY (MTW) (LCC - 20) (C2F)
    - USS SHILOH (CG-67) (in C3F)
    - USS BLUE RIDGE (BLR) (LCC-19) (C7F)
  - ◆ AADCS has deployed to SIXTH Fleet aboard MTW, to FIFTH Fleet aboard SHILOH, and is used in SEVENTH Fleet on BLR.
- **Operational use in OIF, OEF, ONE**
- **Being installed at JNIC in July 03 (PLANEX, WARGAME)**

# Numbered Fleet AORs

★ Fleet HQ



NOTE: NORTHCOM AOR extended to seaward from North America landmass  
FC (NAVNORTH), C3F (NAVNORTHFLT WEST), C2F (NAVNORTHFLT EA)

# AADCS at Sea



- In C3F - **USS SHILOH (CG-67)**
- C2F - **USS MOUNT WHITNEY (LCC-20)**
- C7F - **USS BLUE RIDGE (LCC-19)**
- C5F - Ashore in Bahrain - **TBD**
- C6F - NATO - site ship / shore - **TBD**
- C3F - ashore in San Diego in '03 - **TBD**



# AADCS Plans Cell - CJTF / Command Ship Configuration



# Planning Module

- AADCS allows the planner to make decisions on optimum use and placement of air and missile defense assets.
  - ◆ Aegis (CG/DDG) (SM-3)
  - ◆ PATRIOT
  - ◆ AEW / AWACS
  - ◆ CAP / DCA
  - ◆ Tankers
  - ◆ UAVs
  - ◆ ESM / ECM
  - ◆ THAAD
  - ◆ MEADS



AADCS Planning Cell

# AADCS Planner Main Display

**PLANNING**

**DISPLAY**

**Netscape**

**White Board**

**Audio Video**

**NO**

**AUDIO**

**SESSION**

**ACTIVE**

**Defensive Counter Air Plans**

Item Name	Comments
ATRC	Training
Briefing Copies	Copies of Briefings
Collaborate Plans	Collaborate Training Plans
Compare Plans	Plans for Demo comparison
Contour Training	Upper Tier Contour Training
Isle-Excursions	Excursions off of Isle Plan
Thailand Training	Thailand Training Scenarios
Timing Plans	Plan/Wargame timing for ORD
Train the Trainer	Training Scenarios for Trainer

New Plan      Copy Plan      Delete      New Folder  
Edit Plan      Paste Plan      Move      New Branch  
Activate Plan      Cancel Compare      Rename      Legend  
Compare Plans      Edit Comments

DRL EOB ECOR OR FOB CONST

DCA Planning    ACA Planning    Incoming Messages

Instructors

Shutdown plan2 08 Jan 1943Z

OT

8 JAN 19:43Z 2002

Brg/Rng Reference -Display Center-  
 Set Ref on left clicks

Bearing: deg  
Range: nm km

Range Scale: 4096 nm

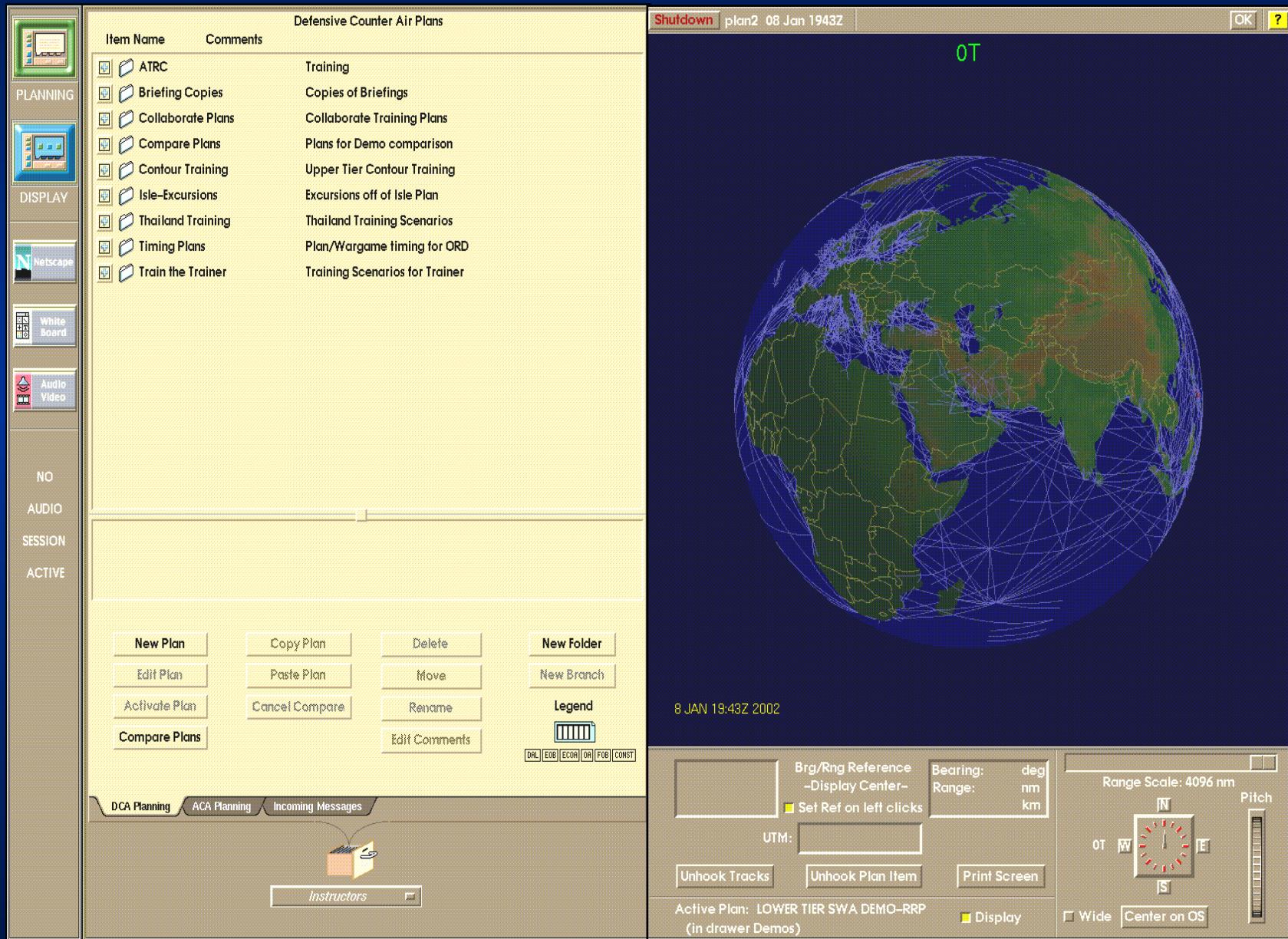
Pitch

W E S N

Unhook Tracks    Unhook Plan Item    Print Screen

Active Plan: LOWER TIER SWA DEMO-RRP  
(in drawer Demos)  Display

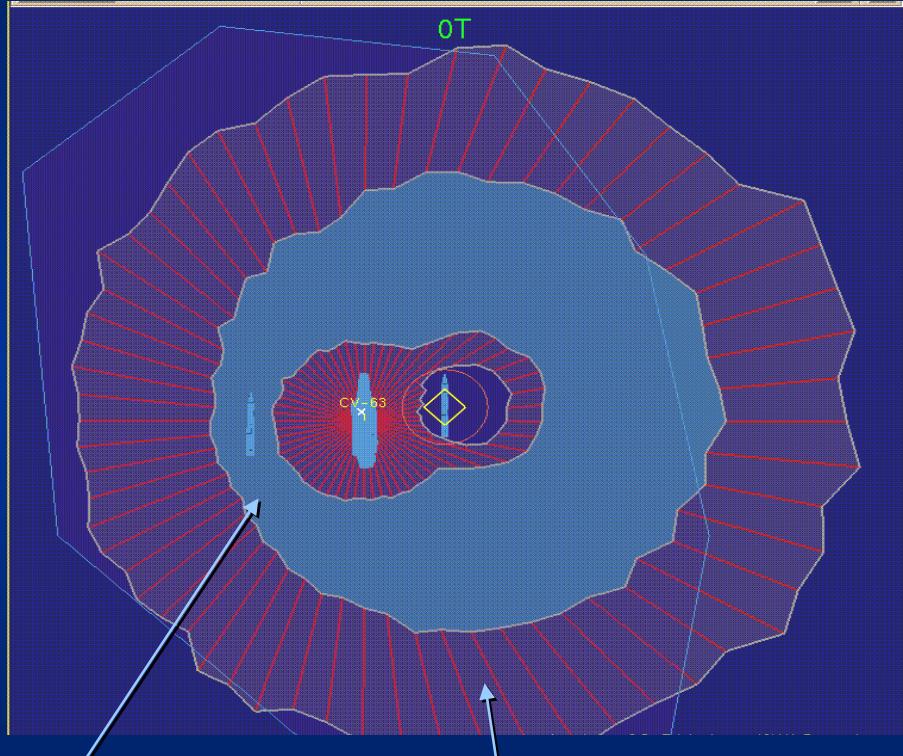
Wide     Center on OS



# Dynamic Air and MD Planning

- The COCOM / JTF commander changes the DAL priority and / or updates the Air Campaign Plan
- The FOB changes as air and missile defense assets and units are added and as tasking changes and positions modified
- Battle damage assessments (BDA) change the EOB
- The J2 approves a new intel estimate (IPB / ECOA)
- TCT / Attack Operations planning and execution of operations

# Analysis Results, Optimized Force Laydown, Surveillance & Coverage

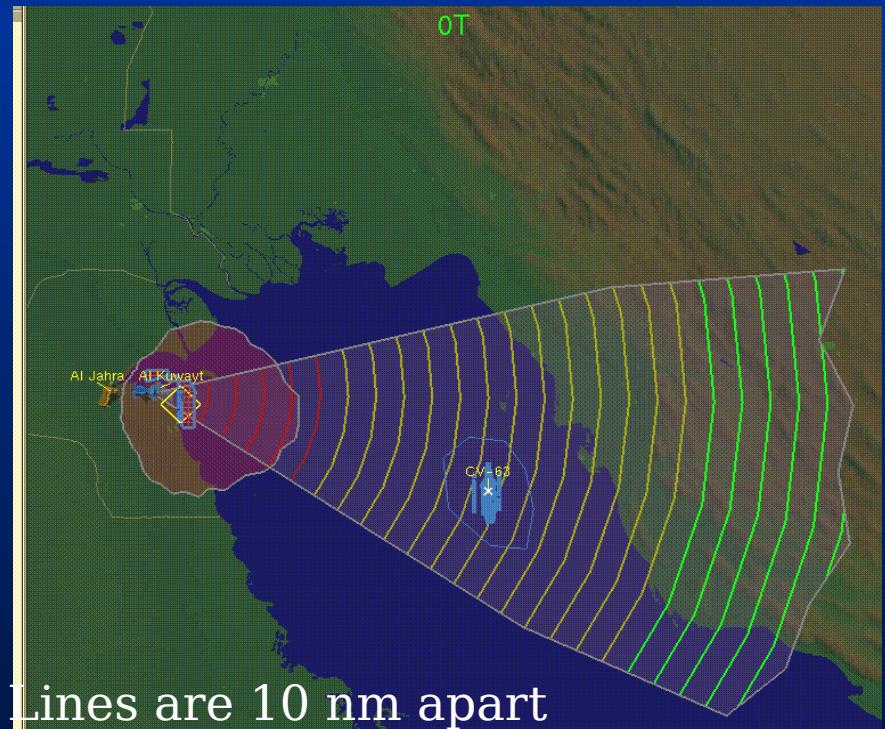


**Variable Detection and Engagement contours depending on terrain**

**Ascent Phase**

**Midcourse Phase**

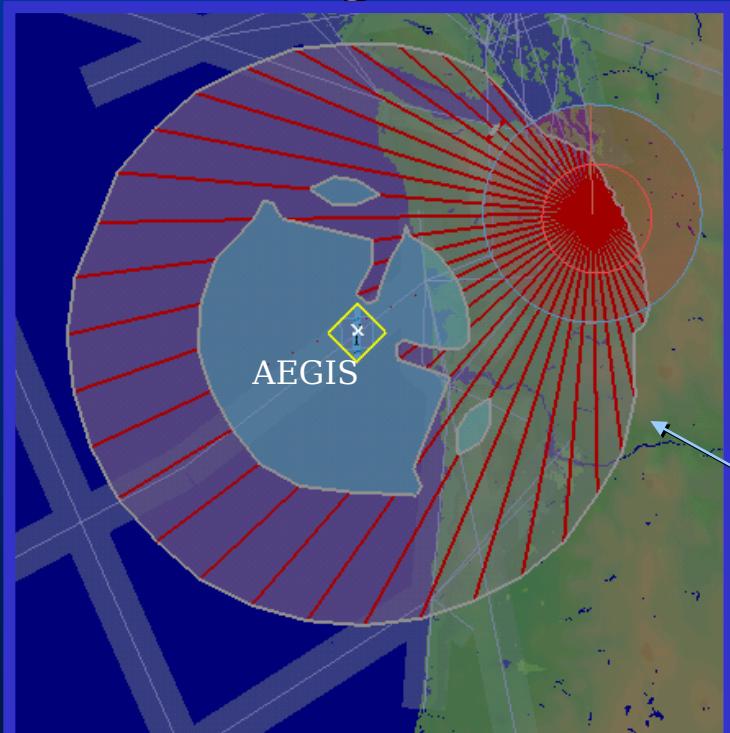
**Terminal Phase**



Lines are 10 nm apart

# Sensor Coverage

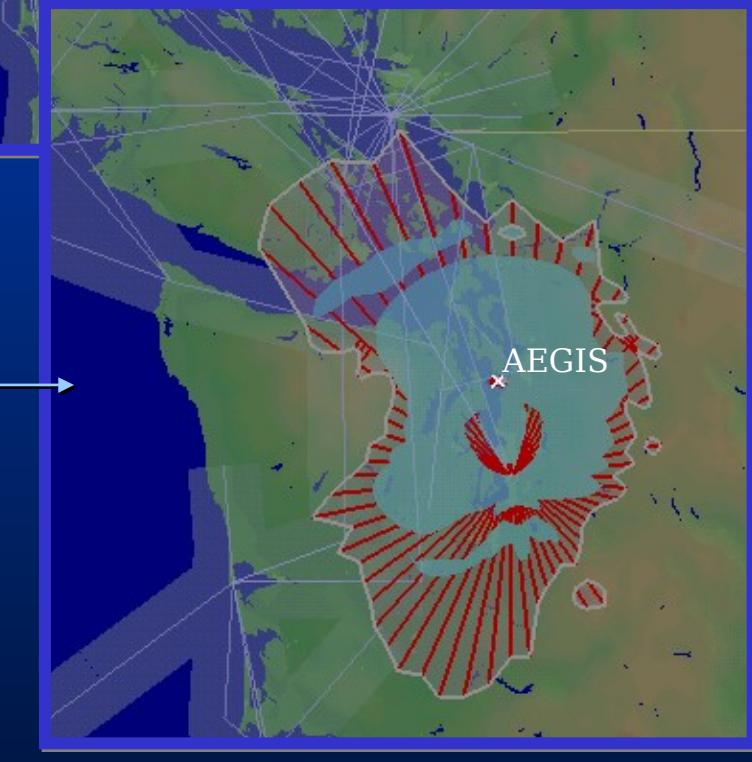
**Variable Detection and Engagement contours depending on THREAT ALTITUDE and TERRAIN  
(conventional air breathing threats)**



1000 ft

5000 ft

10,000 ft



Defended Assets	Lock	ABT	SRBM	MRBM	Contour
HILO POPULATION CENTER	<input type="checkbox"/>		no thrt	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WAIMEA KOHALA VILLAGE	<input type="checkbox"/>		no thrt	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TURQUOISE CITY CTR	<input type="checkbox"/>	uncov'd	no thrt	<input type="checkbox"/>	<input checked="" type="checkbox"/>
KEHENNA PRESIDENTIAL AREA	<input type="checkbox"/>		no thrt	<input type="checkbox"/>	<input checked="" type="checkbox"/>
HILO GOVT BLDGS	<input type="checkbox"/>		no thrt	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DA Raid Sizes

	ABT	TBM
EOB	12	15
Max Exp	4	4
Engage	4	4
Engage Pk	90.0%	90.0%

Unit Limits for WAIMEA KOHALA VILLAGE

Patriot:  Hawk:  Ships:  Save

Units	PTL	Location (constrained)	Contour	AOM
CRUISER3 USS DAHLGREN 1	0	19:42:00 N 154:54:00 W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
A/1-1 ADA(P)	309	20:04:18 N 155:42:37 W	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Move Unit

TBM Threat Assignment

- Upper Tier
- Lower Tier

Unit Loadout

- SM2 BLK3A: 40
- SM2 BLK3B: 40
- SM2 BLK4A: 20
- SM3: 15

Threat to DA

Type	Raid Size	Sector	Contour
SCUD B TBM	1	297-303	<input type="checkbox"/>
Full DA Coverage			
SCUD C TBM	1	297-303	<input type="checkbox"/>
Full DA Coverage			

HICKAM

Selected Unit has been planned to cover DA against Threat

AADC PLAN CC Plan Units

SAM Engage Pk LoTier: 90 LoTier Coverage

Surveil Threats: Union Intersect UpTier: 90 UpTier Coverage

Unassigned Threat Contours ABT: 90 ABT Intercept & Detect

Navigate Auto Recenter Discard Changes Done

# Plan Summary Panel

Plan Comparison

	Thailand-2a-1	Thailand-2a-2	Thailand-2a-3
Thon Buri	FULLY COVERED	FULLY COVERED	FULLY COVERED
MAX TBM RAID SIZE	4	4	4
MIN TBM PROB. KILL	0.850	0.950	0.950
MAX ABT RAID SIZE	6	6	6
MIN ABT PROB. KILL	0.850	0.850	0.850
UNITS	CG-68 DDG-57 D/1-1 ADA(P)	C/1-1 ADA(P) D/1-1 ADA(P)	A/1-1 ADA(P) B/1-1 ADA(P) C/1-1 ADA(P)
THREATS	Burn2 Cam1 Cam2 Laos2 Laos4	Burn2 Cam1 Cam2 Laos2 Laos4	Burn2 Cam1 Cam2 Laos2 Laos4
CV-63	FULLY COVERED	FULLY COVERED	FULLY COVERED
MAX TBM RAID SIZE	0	0	0
MIN TBM PROB. KILL	0.850	0.850	0.850
MAX ABT RAID SIZE	6	6	6
MIN ABT PROB. KILL	0.850	0.850	0.850
UNITS	CG-71	CG-68 CG-71 DDG-51	CG-68 CG-71 DDG-51
THREATS	Burn2 Cam1 Cam2 Cam5	Burn2 Cam1 Cam2 Cam5	Burn2 Cam1 Cam2 Cam5
CVN-68	FULLY COVERED	FULLY COVERED	FULLY COVERED
MAX TBM RAID SIZE	0	0	0
MIN TBM PROB. KILL	0.850	0.850	0.850
MAX ABT RAID SIZE	6	6	6
MIN ABT PROB. KILL	0.850	0.850	0.850
UNITS	DDG-51	DDG-57	DDG-57
THREATS	Burn2 Cam1	Burn2 Cam1	Burn2 Cam1
Port 1	FULLY COVERED	FULLY COVERED	NOT COVERED
MAX TBM RAID SIZE	0	0	0
MIN TBM PROB. KILL	0.850	0.850	0.850
MAX ABT RAID SIZE	6	6	6
MIN ABT PROB. KILL	0.850	0.850	0.850
UNITS	DDG-51	DDG-57	DDG-57
THREATS	Burn2 Cam1	Burn2 Cam1	Burn2 Cam1

Show Threat Types Allocation Coverage

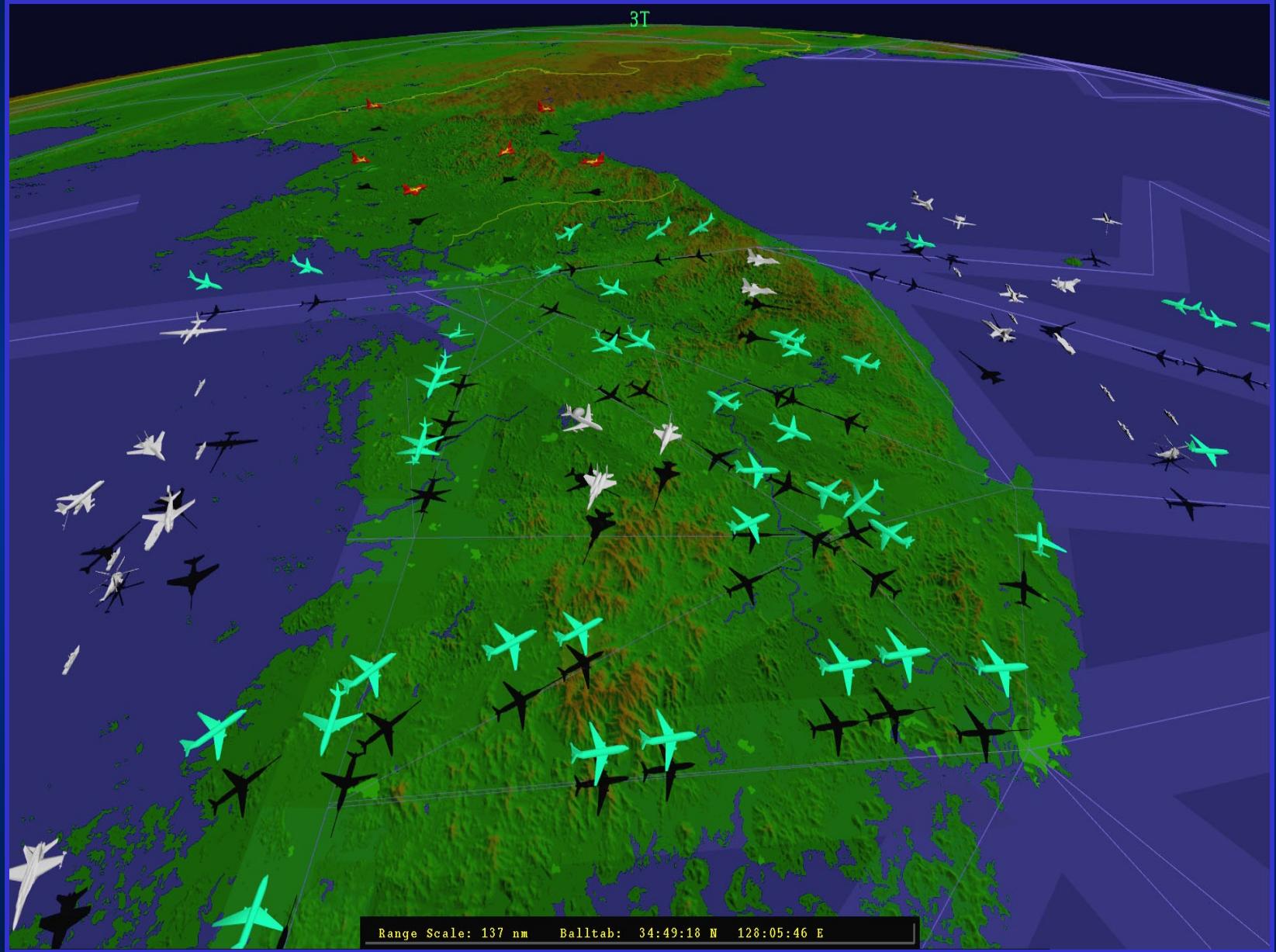
Quit

# Multiple Plan Analysis Comparison

# AADC Planning - Outputs

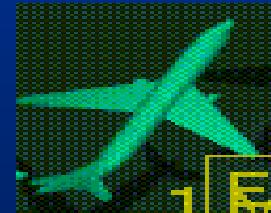
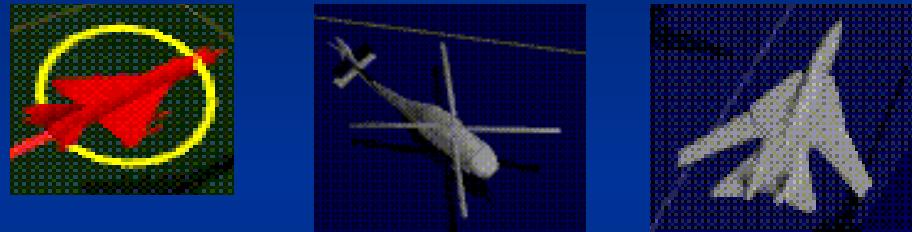
- **Provide analytical trade-off's to JFACC / AADC / Battle Group Commanders for employment of forces:**
  - ◆ CAP / FEZ vs. AEGIS / MEZ / JEZ
  - ◆ CAP (air) vs. Patriot / THAAD (land)
  - ◆ AEGIS (sea) vs. Patriot / THAAD (land)
- **Provide answers to these questions:**
  - ◆ **What can our forces adequately defend?**
  - ◆ **Where should my assets be stationed / positioned?**
  - ◆ **How can I optimize allocation of scarce assets between JFMCC, JFLCC, & JFACC?**
- **Specific products in a CJTF / JFACC environment**
  - ◆ **Air Defense Plan (ADP)**
  - ◆ **ACMREQ, AIRSUPPREQ, TACOPDATs**
  - ◆ **Inputs to ATO / ACO / SPINS / MAAP**

# AADC Operations 3-D View



# Operations Module

**A situational awareness enhancement tool that allows you to see the entire theater in 3-D, using understandable graphic representations of aircraft, ships, ballistic missile trajectories, geography, and specified land-based platforms providing a fully Integrated Air Picture**



# Operations Cell - CJTF / Command Ship configuration



# Operations Console



# PACOM FOCUS AREAS

- **For IMD 3-02 PLANEX, AADCS represents PACFLT / C7F Planning Cell and PACFLT / C3F / C7F force integrator for entire PACOM AOR**
- **Ability to M&S Full Threat Spectrum with C2BMC Limitations and Attack Operations Results**
- **Collaborative planning capability evaluation**
  - ◆ AADC / BMDS (JDP/JEDA/CAPS) Interoperability
  - ◆ Execute AADC Reachback planning to remote node
- **Cross COCOM Coordination for IMD**
  - ◆ Also CFMCC, CFACC, CFLCC IERs

# SUMMARY

- **AADCS is deployed NOW.**
- **The Lesson of OIF is that new systems and procedures are required for real IAMD, not a partial, segmented solution.**
- **Active C2 across local, regional, theater, and global areas requires cohesive SA.**



AADCS = Situational Awareness + Active C2  
with robust analysis